

# Notice of Allowability

Application No.

09/732,810

Examiner

Longbit Chai

Applicant(s)

DANIELS ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview on 3/15/2005.
2. ☒ The allowed claim(s) is/are 1,4-10,12 and 14-16.
3. ☒ The drawings filed on 03 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

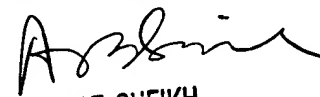
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 3/23/2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

### DETAILED ACTION

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Eustace P. Isidore on 3/15/2005.

The application has been amended as follows:

3. Please replace claim 1 with the following:

A method for providing access protection to electronic storage devices, said method comprising the steps of providing a device-stored hardware-level security code for a storage device on which is stored an electronic file to which user access is restricted;

initializing said security code within said storage device during set-up of said storage device, wherein said security code is unique to said storage device and is required to complete all accesses to said storage device, including read accesses and write accesses. wherein said initializing includes:

blocking access to said storage device during said initializing; and

placing said security code within pre-determined bits of a microcode of the

storage device, wherein said predetermined bits are defaulted to a default value when no security code is placed therein;

providing within an operating system (OS) of a user computer an OS-extension that enables (1) retrieval of said security code from said storage device to said user computer system and (2) blocking access to said storage device by processes on said user computer system when a user-provided code does not match the security code retrieved from the storage device;

wherein the OS-extension enables use of the hardware-level security code within a localized, OS-level security checking process, wherein said hardware-level security code is loaded into the OS-level security checking process whenever a user process on the user computer system attempts a read or write operation on said storage device; and

allowing access by said user process to said storage device from the user-computer system with the OS-extension only when the user-provided code is determined by the localized, OS-level security checking process to match said hardware-level security code.

4. Please cancel claim 2.
5. Please replace claim 9 with the following:  
A computer program product comprising:  
a computer readable medium; and

program instructions stored on said computer readable medium for implementing file access protection by retrieving a locally-stored hardware-level security code for a remote storage device in which is stored an electronic file to which user access is restricted, wherein said security code is placed within said storage device during set-up of said storage device, wherein said security code is unique to said remote storage device and is required to complete all accesses to said storage device, including read accesses and write accesses;

providing within an operating system (OS) of a user computer an OS-extension that enables (1) retrieval of said security code from said storage device to said user computer system and (2) blocking access to said storage device by processes on said user computer system. when a user-provided code does not match the security code retrieved from, the storage device;

wherein the OS-extension enables use of the hardware-level security code within a localized, OS-level security checking process, wherein said hardware-level security code is loaded into the OS-level security checking process whenever a user process on the user computer system attempts a read or write operation on said remote storage device;

receiving at the OS-level a process request for access to said storage device;

retrieving from the storage device the security code stored within microcode of the device and forwarding the security code to the localized. OS-level security checking-Process; evaluating said security code retrieved for a pre-defined default value;

in response to said security code having a pre-defined default value, providing said user with unrestricted access to said storage device; and

when the security code does not have the pre-defined default value, allowing access to said storage device only when the user-provided code is determined by the local, OS-level security checking process to match said hardware-level security code.

6. Please replace claim 14 with the following:

The computer program product of Claim 9, wherein, when said security code does not have said pre-defined default value, said program product further comprises program instructions for: comparing said security code with said user-provided code; providing access when said security code matches said user-provided access code; and denying access when said security code does not match said user-provided access code.

7. Please replace claim 15 with the following:

The computer program product of Claim 9, further comprising program instructions for:

providing process-based security checks for access to said storage device, wherein an access security check is initiated for each read/write access to said storage device by a different process executing on said local user computer system; and

wherein each process associated with a single application initiated by the user is provided a same user-entered access code as a default and individual processes may

be provided a hardware-specific access code for the particular storage device to which the process requests access.

8. Please cancel claim 17 – 29.

***Allowable Subject Matter***

9. Claims 1, 4 – 10, 12 and 14 – 16 are allowed.
10. The following is an examiner's statement of reasons for allowance:

The above mentioned claims are allowable over prior arts because the CPA (Cited Prior Art) of record fails to teach or render obvious the claimed limitations in combination with the specific added limitations, as recited in independent claim 1 and subsequent dependent claims.

The CPA does not teach or suggest a system for providing a device-stored hardware-level security code for a storage device and initializing said security code within said storage device during set-up of said storage device that includes blocking access to said storage device during said initializing and placing said security code within pre-determined bits of a microcode of the storage device, wherein said predetermined bits are defaulted to a default value when no security code is placed therein. The new system also provides an operating system (OS) -extension enables use of the hardware-level security code within a localized, OS-level security checking process, wherein said hardware-level security code is loaded into the OS-level security

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checking process whenever a user process on the user computer system attempts a read or write operation on said storage device.

Claims 9 and subsequent dependent claims would also be allowable for the reasons stated above

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LBC

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